

REMARKS

By this amendment, a cross reference to related applications is inserted into the specification as required by the examiner. In addition, the specification is amended wherein an application number is replaced by the patent number and minor errors are corrected. Also, claims 1-9 are canceled and claims 10-19 added so as more clearly to define applicants' invention in view of the art cited by the examiner and to overcome the examiner's claim objections and claim rejections under 35 U.S.C. 112. Reconsideration of applicant's invention as defined in claims 10-19 is requested.

With respect to the examiner's rejection of claims 1-9 under the doctrine of obviousness - type double patenting, it is believed that new claims 10-19 are patentably distinct from the claims of patent 6,866,207. Therefore, a terminal disclaimer is not being submitted at this time.

By the office action of April 29, 2005, the examiner rejected original claims 1-9 under 35 U.S.C. 103(a) as being unpatentable over Shortridge et al. or Zapp. Shortridge's system resembles a modern ink jet printer which is sufficient at slow operating speeds in certain applications but is not operable in paper making where varying speeds and accuracy are critical. In fact, in paper making, the paper thickness is sometimes even less than the paint layer applied to the leather shown in Shortridge.

Zapp shows a rotating spray wheel system which is incapable of accuracy and consistency in cross-directional profiling, as required in paper making.

In paper making, paper surface treatment requires a profiling capability to correct for the wear of machine parts wherein the machine's length can easily exceed 1,000 feet while the width of the paper web itself can be up to 30 feet with the machine operating at speeds up to 6500 fpm. This machinery has a multitude of various components starting from the beginning when paper is created inside the spray box through a pressing operation with several high pressure often vacuum aided rollers in series that are covered by single or double woolen or plastic filament felts that all wear or plug unevenly requiring frequent replacement. Following this, the dryer section includes steam heated cylinders that are covered with filament felts with a similar tendency to plug or cause profile variations. The paper web with chemicals and all materials added to it must be controlled for cross-direction finished thickness to compensate for all the slow wearing and plugging of the controllers, rollers, wires, felts and fabrics.

In applicant's apparatus, spraying is one element and smoothing the surface of the sprayed material is another. Inherent in this operation are aerosols which are emitted from the nozzles and, if released outside the spray box, are highly charged particles which stick to every available oppositely charged surface

especially with damaging impact to electronics. The advantage of applicant's apparatus is that the aerosols are contained inside the spray box and then removed and cleaned. Applicant's closed spray box is achieved essentially by the adjustable entry and exit gaps disposed above the substrate and as defined in claim 10. For these reasons, claim 10 is believed allowable.

Dependent claims 11-19 are believed allowable by reciting the structural details of closure mechanisms 4, 5, 6, and 7 disposed at adjustable gap 22.

From the above, it is believed that this application is in condition for allowance. Therefore, reconsideration and allowance of claims 10-19 are requested.

Respectfully submitted,



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